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May 15, 2020

Via ECFS and IBFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Written *Ex Parte* Presentation Regarding Certified Aviation Devices and the 1 dB Standard, **IB Docket Nos. 11-109 and 12-340; IBFS File Nos. SAT-MOD-20120928-00160, SAT-MOD-20120928-00161, SAT-MOD-20151231-00090, SAT-MOD-20151231-00091, SES-MOD-20121001-00872, and SES-MOD-20151231-00981**

Dear Ms. Dortch:

As a global leader in GPS-based positioning and navigation technology, Garmin International, Inc. (“Garmin”) files this letter to supplement and correct the record regarding several faulty assertions in the recent Order and Authorization, released April 22, 2020, concerning Ligado Networks LLC’s (“Ligado’s”) license modification applications.¹ On December 16, 2015, Garmin entered into a “Settlement Agreement and Releases” with Ligado. This filing is consistent with the terms of that agreement.²

¹ *LightSquared Technical Working Group Report et al.*, Order and Authorization, FCC 20-48 (rel. Apr. 22, 2020) (“*Order*”).

² Letter from Gerard J. Waldron, Counsel to New LightSquared LLC, to Marlene H. Dortch, Secretary, FCC, IB Docket Nos. 11-109 *et al.* (Dec. 17, 2015), transmitting the “Settlement Agreement and Releases” (“*Settlement Agreement*”).

The *Order* relies heavily on what it refers to as “co-existence agreements” between Ligado and GPS manufacturers.³ Garmin states again for the record that it never entered into a co-existence agreement with Ligado.⁴ Instead, Garmin entered into a technical settlement agreement in 2015 to resolve ongoing litigation brought against it by Ligado. Nothing in the Settlement Agreement constitutes support for or an endorsement of Ligado or its proposed services or technologies.⁵ Garmin states again that it does not support or endorse Ligado’s license modification applications. To the contrary, the Settlement Agreement captures Garmin’s ongoing concern about its certified aviation devices, preserves its ability to petition the government for protection of these devices, and maintains its ability to advocate for the use of a standard based on a 1 dB decrease in the Carrier-to-Noise Power Density Ratio or C/N₀ (“1 dB Standard”) in evaluating harmful interference to all GPS devices.⁶

³ See *Order* ¶ 62. (“The GPS receiver manufacturers have entered into these co-existence agreements and provided their support for Ligado’s license modification application as amended, establishing that co-existence is possible and feasible under the technical terms of the agreements, including the condition that the manufacturers are notified in advance of Ligado’s station deployments.”).

⁴ See, e.g., Comments of Garmin International, Inc., Docket Nos. 11-109, *et al.*, May 23, 2016 at 2.

⁵ With certain exceptions, Garmin did agree to “not object” for a period of seven years with respect to some of its devices as long as certain technical restrictions were met. See Settlement Agreement at ¶¶ 9(a) and 10(a). The Settlement Agreement also made plain, however, that “nothing in this Settlement Agreement shall constitute an endorsement by Garmin of any technical, operational, policy, regulatory, or other matter regarding LightSquared’s network and business plan, and that LightSquared shall not make any statement or representation to such effect.” See *id.* at ¶ 12.

⁶ See *id.* at ¶ 9(a). (“For the avoidance of doubt, this Settlement Agreement does not address the potential for Receiver Overload or other interference to Certified Garmin GNSS Aviation Equipment caused by LightSquared’s ATC use, or use by its Assigns or Network Users, of the 1526-1536 MHz spectrum (the ‘Aviation Spectrum Issue’), with regard to which the Parties reserve the right of each to petition the FCC and any other government forum with regard thereto.”) See also *id.* at ¶ 6(h), regarding exclusion of the 1 dB Standard from the scope of the Settlement Agreement’s provisions and restrictions.

Garmin has been consistently vocal in expressing its concerns about the ability of its certified aviation devices to function as intended in the presence of interference from Ligado, enumerating the ongoing and serious safety risks that Ligado's terrestrial network poses to such devices and the safety-of-life services provided by Garmin's customers that utilize them.⁷ The FCC's apparent peremptory dismissal of these well-documented concerns is troubling.

In addition to its certified aviation devices, Garmin has pioneered new GPS navigation technologies for automotive, fitness, marine, and outdoor recreation markets. This diverse family of hand-held, wearable, portable and fixed-mount GPS-enabled products relies on a stable and predictable spectrum environment governed by the 1 dB Standard. It is therefore mystifying that the *Order* rejects decades of precedent in domestic and international fora, the consistent and unanimous support of the entire GPS industry, and the collective government support of the U.S. Department of Transportation's testing, all of which advocated for utilization of the 1 dB Standard. Garmin continues to maintain that the 1 dB Standard is the only way to reliably protect GPS devices from harmful interference.⁸

⁷ See, e.g., Letter from M. Anne Swanson, Counsel to Garmin International, Inc., to Marlene H. Dortch, Secretary, FCC, Docket Nos. IB 11-109 *et al.* (Sept. 10, 2019) ("Garmin Sept. 2019 Ex Parte"); Reply Comments of Garmin International, Inc., IB Docket Nos. 11-109 *et al.*, at 4-8 (July 26, 2018); Comments of Garmin International, Inc., IB Docket Nos. 11-109 *et al.*, at 3-9 (July 9, 2018); Letter from M. Anne Swanson, Counsel to Garmin International, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket Nos. 11-109 *et al.* (Oct. 10, 2016).

⁸ For Garmin's past submissions on this issue, see, e.g., Letter from J. David Grossman, GPS Innovation Alliance, to Marlene H. Dortch, Secretary, FCC, Docket Nos. 11-109 *et al.* (Mar. 4, 2020), transmitting Letter from J. David Grossman, GPS Innovation Alliance, to Marlene H. Dortch, Secretary, FCC, Docket Nos. 11-109 *et al.* (Feb. 18, 2020); Letter from J. David Grossman, GPS Innovation Alliance, to Marlene H. Dortch, Secretary, FCC, Docket Nos. 11-109 *et al.* (Dec. 20, 2019); Garmin Sept. 2019 Ex Parte; Letter from M. Anne Swanson, Counsel to Garmin International, Inc., to Marlene H. Dortch, Secretary, FCC, Docket Nos. 11-109 *et al.* (May 15, 2018); Letter from F. Michael Swiek, GPS Innovation Alliance, to Marlene H. Dortch, Secretary, FCC, Docket Nos. 11-109 *et al.* (July 13, 2017).

Very truly yours,

By /s/
Scott Burgett
Director, GNSS and Software Technology

By /s/
Clay Barber
Principal Software Engineer

By /s/
Bronson Hokuf
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